

FRIDAY, 4:00 PM
Ballroom 3

PROKARYOTIC MUTAGENESIS
T. Ong and R.A. Peiray,
Presiding

4:00
ANTIMUTAGENIC ACTIVITY OF
CHLOROPHYLLIN AGAINST
COMPLEX ENVIRONMENTAL
MIXTURES AND CHEMICAL MU-
TAGENS USING A YAMAWAZA
FORWARD MUTATION ASSAY
SYSTEM
J.H. Russell, J. Nath, T. Ong, West
Virginia University and National Insti-
tute for Occupational Safety and
Health, Morgantown, WV

4:15
THE INVOLVEMENT OF OXYGEN
IN BISULFITE MUTAGENESIS
D.A. Pagano, E. Zeiger, National In-
stitute of Environmental Health Sci-
ences, Research Triangle Park, NC

4:30
MUTATIONAL SYNERGISM BET-
WEEN CHEMICAL MUTAGENS
AND HIGHLY AROMATIC CHEMI-
CAL MIXTURES
B.A. Peiray, D.L. Stewart, K.J. Som,
Pacific Northwest Laboratory, Rich-
land, WA

4:45
MUTANTS OF E. COLI SENSITIVE
TO PEROXIDE AND NEAR
ULTRAVIOLET RADIATION ONLY
A. Eshenbark, University of Missouri,
Columbia, MO

FRIDAY, 4:00 PM
Ballroom 6

MOLECULAR MECHANISMS
IN MAMMALIAN CELLS
G.M. Adair and M. Mashev,
Presiding

4:00
BENZOLAPYRENE DIOLEPOXIDE
MUTAGENESIS AT THE APT
LOCUS IN CHO CELLS
M. Mashev, B.W. Glickman, York
University, Toronto, Canada

4:15
THE SPECIFICITY OF UV-
INDUCED MUTATIONS AT AN KN-
OWN GENOMIC LOCUS IN MAM-
MALIAN CELLS
E.A. Hershock, A.J. Ursprung, B.W.
Glickman, York University, Toronto,
Canada

4:30
KINDS OF MUTATIONS FORMED
WHEN A SHUTTLE VECTOR CON-
TAINING ADDUCTS OF THE
LARGE 72 DIOL DIOPOXIDE OF
BENZOLAPYRENE (BPDE) REPLA-
CES IN HUMAN CELLS
J.-L. Yang, A.M. Maher, J.J. McCor-
mick, Michigan State University, East
Lansing, MI

4:45
MUTATION, INACTIVATION, OR
LOSS OF THE APT GENE IN
APT CHO CELL TRANSFER-
RANTS
G.M. Adair, R.J. Nadeau, K.A. Brad-
ermeier, University of Texas System
Cancer Center, Smithville, TX

100 100 90 18

FRIDAY, 4:00 PM
Friday 7-9

MUTAGENISM

W.E. Blum and E.S. Shapiro,
Presiding

4100 **ION OF NITRO-
SUBSTITUTED PAH BY CHEMI-
CAL MUTATION IN THE AMES
FLA. INCORPORATION ASSAY**
J.M. Golligorsky, I.M. Bell, A. Glick, R.
Sangster, University of North Carolina,
Chapel Hill, NC

4110 **MUTAGENICITY OF D. AND L-
ISOMERS OF AZOXYALANES**
(AZOXYALANES)
W.M. Owala, R.C. Rudolph,
Khalaf, H.A. Niles, Yale
University, Ithaca, Jordan, and
England New University, Pullman, WA

4120 **MUTAGENIC AND CLASTOGENIC
EFFECTS OF 1,2-DICHLORO-4-
(DIHYDROMETHYL)-
HYDROXY-2,3,4,5-TETRAHYDRO-6-
AND ITS DERIVATION BY
LIVER COMPONENTS**
J.R. Meyer, W.F. Blum, R.H. Knecht,
U.S. Environmental Protection Agency,
Health, Oil and SRI/Tetrahedron,
Mont Park, CA

4130 **ACTIVITIES OF XENOBIOTIC
METABOLISM ENZYMES IN
CELLS COMMONLY USED IN
GENOTOXICITY ASSAYS**
D. McCreary, I. Edwards, W.
Casper, (Invited by R. Tannen), In-
ternational Research Institute, Ltd.,
Edinburgh, Scotland and Na-
tional Institute of Environmental
Health Sciences, Research Triangle
Park, NC

FRIDAY, 4:00 PM
Friday 7-9

**GENETIC CELL AND HERITABLE
MUTATIONS**

R.L. Dabbs and K.S. Lippert,
Presiding

4140 **CORRELATION BETWEEN ENU-
INDUCED MUTATION FREQUEN-
CY AND DNA REPLICATION PRO-
CESS IN MOUSE STEM CELL
SPERMATOGONIA**
W.L. Roper, P.H. Hunsicker, J.W.
Boggs, Oak Ridge National La-
boratory, Oak Ridge, TN

4150 **DNA BREAKAGE AND REPAIR IN
MOUSE SPERMATOCYTES AND
SPERMATIDS AFTER EXPOSURE
TO X RAYS OR ETHYLENE OXIDE**
C.A. Sells, E.S. Gensler, Oak Ridge
National Laboratory, Oak Ridge, TN

4160 **GENETIC DAMAGE AND THE EX-
PRESSION OF BEHAVIORAL AB-
NORMALITIES IN THE PROGENY
OF MALE RATS EXPOSED TO
IONIZING RADIATION**
M.C. Lowery, R. Hunsicker, W.W.
Auer, P.M. Adams, M.S. Leggett, The
University of Texas Medical Branch,
Galveston, TX

4170 **RADIATION INDUCTION OF
GENETIC DAMAGE IN MOUSE
IMMATURE THYCYTES CON-
FIRMED AND MEASURED**
R.L. Dabbs, T. Stromer, T.C. Kwan,
Lawrence Livermore National La-
boratory, Livermore, CA

06 NOV 90 48

FRIDAY, 5:00 PM
Ballroom 1

PROKARYOTIC MUTAGENESIS
T. Oag and R.A. Peary,
Presiding

5:00
**MECHANISMS OF GLUTATHIONE
MUTAGENICITY IN SALMONELLA**
R. Zeiger, A.A. Stark, D.A. Fagan,
National Institute for Environmental
Health Sciences, Research Triangle
Park, NC and Tel Aviv University,
Tel Aviv, Israel

5:15
**COMPARATIVE ANTIMUTAGENI-
CITY OF FIVE COMPOUNDS
AGAINST MUTAGENIC COMPLEX
MIXTURES**
T. Oag, W.Z. Whong, J. Stewart,
H.E. Workman, National Institute for
Occupational Safety and Health, Mon-
roeville, WV and Illinois State
University, Normal, IL

5:30
**MACROPHAGE DERIVED OXY-
GEN FREE RADICALS INDUCE
MUTATIONS IN SALMONELLA
TA101**
A. Pariza, K. Morikawa, SRI Inter-
national, Menlo Park, CA

5:45
**HISTIDINE BIOASSAY USING SAL-
MONELLA: POSSIBLE APPLICA-
TIONS TO AMES TEST**
D.B. Bach, G.J. Bryan, Armed
Forces Institute of Pathology, Wash-
ington, D.C. and University of
Wisconsin, Madison, WI

6:00
**MAGNIFYING MEASUREMENT OF
INDUCED MUTAGENIC
RESPONSES IN THE AMES TEST**
M.S. Maril, V.G. Randall, USDA
Western Regional Research Center,
Berkeley, CA

FRIDAY, 5:00 PM
Ballroom 6

**MOLECULAR MECHANISMS
IN MAMMALIAN CELLS**
G.M. Adair and M. Masur,
Presiding

5:00
**A COMPARISON OF MUTATIONS
INDUCED BY X-RAYS AND
ETHYLMETHANESULFONATE
(EMS) AT THE HGPRT AND TK
LOCI IN THE HUMAN LYMPHO-
BLAST CELLS**
H.I. Lawr, D.W. Yandell, J.B. Little,
Harvard School of Public Health, Bos-
ton, MA

5:15
**IN VITRO MUTATION INDUCTION
BY GAMMA IRRADIATION IN HU-
MAN LYMPHOCYTES**
J.P. O'Neill, M. Samuels, J.A. Nel-
son, T.C. Hunter, R.J. Albert,
University of Vermont, Burlington,
VT

5:30
**THE RELATIONSHIP BETWEEN
BENZ(a)PYRENE DIOL
EPOXIDE DNA ADDUCTS AND
MUTAGENICITY IN THE
CHROMIDART ASSAY**
L. Bocio, L.R. Shugart, A.W. Hale
(Invited by J.S. Watanabe), University
of Kentucky, Lexington, KY, Oak
Ridge National Laboratory, Oak
Ridge, TN, and The University of
Texas Medical Branch, Galveston, TX

5:45
**ANALYSIS OF DNA ADDUCT
FORMATION AND GENE
MUTATION INDUCTION BY N-
METHYL- AND N-ETHYL-
NITROSUREA IN MAMMALIAN
CELLS (CHROMIDART ASSAY)**
H.W. Tobinmann, C.H. Schröder,
A.W. Hale (Invited by E.S. Von
Hahn), German Cancer Research
Center, Heidelberg, Federal Republic
of Germany, Oak Ridge National La-
boratory, Oak Ridge, TN, and The
University of Texas Medical Branch,
Galveston, TX

06 16V 90 48

FRIDAY, 5:00 PM
Parlors 1-3

METABOLISM
W.F. Blazak and B.S. Shene,
Presiding

5:00
A COMPARATIVE STUDY OF THE
ACTIVATION OF BENZO(A)
PYRENE (BP) AND 2-
AMINOFLUORENE(AF) TO MU-
TAGENS BY HEPATIC S9 FRACTIONS
FROM CRAYFISH, FISH
AND RATS, AS MEASURED IN
THE AMES ASSAY
B.S. Shene, A.M. Tronclair, C.S.
Jewell, G.W. Winston, Louisiana State
University, Baton Rouge, LA

5:15
HYPOCHLORITE ACTIVATION OF
B(a)P 7,8-DIHYDRODIOLS TO MU-
TAGENS: A MECHANISM FOR
MUTAGENIC ACTIVATION BY
STIMULATED POLYMORPHONUCLEAR
LEUKOCYTES
H.H. Seiger, W.H. Koch, G.H. Foster,
The Johns Hopkins University,
Baltimore, MD

5:30
FACTORS RESPONSIBLE FOR
SPECIES DIFFERENCES IN
BLADDER CANCER INDUCTION
Y. Shafir, S. Kohn, Y. Schiger,
T.K. Red, R. Lippman, Integrated
Laboratory Systems, and National In-
stitute of Environmental Health Sci-
ences, Research Triangle Park, NC

5:45
EFFECT OF DIETARY TRANS FAT-
TY ACIDS ON MUTAGENICITY
N.R. Green, M. Schaaf, Florida State
University, Tallahassee, FL

FRIDAY, 5:00 PM
Parlors 7-9

**GERM CELL AND HERITABLE
MUTATIONS**
R.L. Dobson and K.S. Lavappa,
Presiding

5:00
VINCRIStINE-INDUCED ANEU-
PLOIDY IN GERMINAL AND
SOMATIC CELLS OF THE
CHINESE HAMSTER
K.S. Lavappa, M.W. O'Donnell, C.W.
Shen, U.S. Food and Drug Adminis-
tration, Washington, DC

5:15
INVESTIGATION OF ABNORMAL
FOETUSES IN THE LITTERS OF
MALE RATS CHRONICALLY
TREATED WITH CYCLOPHOS-
PHAMIDE
D. Anderson, P.C. Jenkins, S.D.
Gargoli, British Industry Biological
Research Association, Cumnor,
Surrey, UK

5:30
TWO-DIMENSIONAL GEL ELEC-
TROPHORESIS FOR THE DETEC-
TION OF HERITABLE MUTA-
TIONS AS QUANTITATIVE AL-
TERATIONS IN PROTEIN EXPRES-
SION
C.E. Chiswell, J. Taylor, D. Graham,
Argonne National Laboratory, Ar-
gonne, IL

5:45
MOLECULAR ANALYSIS OF
DIPEROXYBUTANE INDUCED MU-
TATIONS IN *DROSOPHILA*
MELANOGASTER
J.T. Reardon (Introd. by P.D. Smith),
Southern Methodist University, Dal-
las, TX

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06 NOV 90

Cellular and Molecular Toxicology Services

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- Enhancement of Viral Transformation
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- Inhibition of Metabolic Cooperation
- Epidermal Cell Promotion
- Sterility Testing

For information, call Dr. Eugene Elmore at (919) 549-0651 or write to:

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P.O. Box 12313
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(919) 549-0651

06 Nov 90 18

SATURDAY, 1:30 PM
Ballroom 5

CYTOGENETIC TESTING II

R.J. Preston,
Presiding

1:30
SUE FREQUENCIES IN CHO
CELLS EXPOSED SIMULTANE-
OUSLY TO ADRIAMYCIN AND
RADIOFREQUENCY RADIATION
V. Charvát, M.L. Meitz, D.N.
Erwin, University of Texas Health Sci-
ence Center and USAF School of
Aerospace Medicine, San Antonio, TX

1:45
INTERACTION OF RESTRICTION
ENDONUCLEASE-INDUCED DNA
DAMAGE WITH DNA REPAIR IN-
HIBITORS IN THE PRODUCTION
OF CHROMOSOME ABERRA-
TIONS
R.A. Winegar and R.J. Preston,
University of Tennessee, Oak Ridge
National Laboratory, Oak Ridge, TN

2:00
MUTAGEN HYPERSENSITIVITY
AND MUTAGEN-INDUCED CHRO-
MOSOME BREAKAGE IN HUMAN
FIBROBLASTS
N.L. Rudd, D.J. Hour, C. Nagata, L.S.
Dimick, U.G.G. Henold, University of
Calgary, Calgary, Alberta, Canada

2:15
KINETICS OF CELL CYCLE PRO-
GRESSION IN DOWN SYNDROME
(DS) AND NORMAL LYMPHO-
CYTES
H.M. Shalh, M.A. Noffs, W.W. Au,
M.S. Legator, The University of Texas
Medical Branch, Galveston, TX

2:30
IN VITRO CYTOGENETIC TESTING
USING SISTER CHROMATID EX-
CHANGE AND CHROMOSOME
ABERRATION ENDPOINTS IN
CHO CELLS
E.S. Lueders, M.J. Morris, B. Zeiger,
American Biogenics Corporation,
Woburn, MA and NIEHS, RTP, NC

SATURDAY, 1:30 PM
Ballroom 6

TEST STRATEGIES AND
ASSESSMENT

W.R. Lower, Presiding

1:30
TESTING THE PREDICTIVITY OF
BATTERIES OF SHORT-TERM
GENOTOXICITY TESTS FOR CAR-
CINOGENIC POTENCY
F.K. Ennever, H.S. Rosenkrantz, Case
Western Reserve University School of
Medicine, Cleveland, OH

1:45
SHORT-TERM TEST ACTIVITY
PROFILES: APPLICATION IN THE
IARC MONOGRAPHS PRO-
GRAMME
M.D. Waters, H.F. Stich, A.L. Brady,
P.H.M. Lokman, L. Haroun, H.
Valink, USEPA, EHRT Inc, RTP,
NC; INO Medical Laboratory,
Rijswijk, The Netherlands; and Inter-
national Agency for Research on
Cancer, Lyon, France

2:00
THE RELATIONSHIP BETWEEN
CHEMICAL STRUCTURE OF NI-
TROFLUORENES AND NI-
TROFLUORENES AND THEIR GENO-
TOXIC ACTIVITY
R.M. Kitchin, W.E. Bechtold, A.L.
Brooks (Retired by N.D. Stephens),
University of Wyoming, Laramie, WY
and Iphelthor, Loskutsky Research
Institute, Albuquerque, NM

2:15
A TEST OF THE UNIFORMITY OF
RADIATION-INDUCED MUTATION
RATES
G.V. Johanna, M.J. Flaws, University
of Illinois, Urbana, IL

2:30
STATUS OF IN SITU ENVIRON-
MENTAL GENOTOXIC SENTINELS
W.R. Lower, S.S. Sandhu, University
of Missouri, Columbia, MO and U.S.
Environmental Protection Agency,
Research Triangle Park, NC

SATURDAY, 1:30 PM
Parkers 1-3

**MECHANISMS IN NON-
MAMMALIAN EUKARYOTES**
R.C. von Borstel, Presiding

1:30
**CHARACTERIZATION OF YEAST
MUTATION *ad1* THAT ENHANCES
PERMEABILITY OF SACCHARO-
MYCES *CEREVISIAE***
B. Winsor, A.A. Potter, F. Karg, E.R.
Neumann, F. Lacroute, Centre Na-
tional Recherche Scientifique, Stras-
bourg, France, Université de Poitiers,
France, Veterinary Infectious Disease
Organization, Saskatoon, and Depart-
ment of Health and Welfare, Ottawa,
Ontario, Canada

1:45
**STUDY OF THE MODIFICATION
OF THE HETEROZYGOUS EF-
FECTS OF MULTICODON DELE-
TION MUTATIONS IN THE *ad1*
REGION OF *NEUROSPORA CRASSA*
BY MEANS OF GENERALLY
MARKED THREE COMPONENT
HETEROKARYONS**
P.J. de Serres, I.R. Miller, Research
Triangle Institute, RTP, NC and Oak
Ridge National Laboratory, Oak
Ridge, TN

2:00
**DEVELOPMENT OF *pMP4*, A
SHUTTLE VECTOR FOR USE IN
DEFINING FRAMESHIFT MUTA-
TIONS AT THE *ad1* REGION OF
YEAST**
M.J. Pleva, D. Kallman, J.L. Lor-
mer, University of Illinois, Urbana, IL
and Oak Ridge National Laboratory,
Oak Ridge, TN

2:15
**ANALYSIS OF REVERSIONS IN-
DUCED BY SODIUM CHLORIDE
AND POTASSIUM CHLORIDE IN
YEAST**
R.R. Parker, R.C. von Borstel,
University of Alberta, Edmonton,
Alberta, Canada

SATURDAY, 1:30 PM
Parkers 7-9

PLANT GENETIC TOXICOLOGY
J.M. Gentile, Presiding

1:30
**DITHYDROCARBAMATE IN-
HIBITS THE ACTIVATION OF 2-
AMINOFLUORENE BY CULTURED
TOBACCO CELLS**
E.D. Wagner, M.J. Pleva, J.M. Gen-
tile, University of Illinois, Urbana, IL
and Hope College, Holland, MI

1:45
**PROMUTAGEN ACTIVATION BY
PHOTOSYNTHETIC AND NON-
PHOTOSYNTHETIC PLANT CELL
CULTURES**
J. Day, G.J. Gentile, J.M. Gentile,
M.J. Pleva, Hope College, Holland,
MI and University of Illinois, Urbana,
IL

2:00
**TRADESCANTIA MICRONUCLEUS
(TRAD MUNE) ASSAY: A POTEN-
TIAL INDOOR POLLUTION MONI-
TOR**
T.H. Ma, M.M. Harris, Western Illi-
nois University, Macomb, IL

2:15
**THE EFFICACY OF THE ROOT
TIP CELL MICRONUCLEUS AS-
SAY FOR WATER POLLUTANTS**
T.H. Ma, Z. Xu, G.L. Cabrera,
R.M.F. Vahlert, G.E. Arreola,
Western Illinois University, Macomb,
IL and Universidad Autónoma de
Querétaro, Mexico

2:30
**MOLECULAR DOSIMETRY: STU-
DIES OF FORWARD MUTATION
INDUCED AT THE *ad1* LOCUS IN
MAIZE BY ETHYL METHANESUL-
FONATE**
W.E. Hoy, M.J. Pleva, University of
Illinois, Urbana, IL

06.18.90

18

***** NOTES *****

Tammyk, Eugene
Dept. of Environmental Sciences
Carleton College, Minn. 55101
Champaign, Ill.
44106 (Ch)

2501644871

SATURDAY, 11 APRIL 1987
Ballroom 4
2:30 - 4:00 PM

POSTER SESSION III

Posters are to be set up by 9:00 am of their scheduled day, and to remain up for viewing until 5:00 pm. It is required that an author be present during the scheduled poster session.

Coffee will be available at the beginning of the Poster Session.

TEST BATTERIES

1. RELATIONSHIPS BETWEEN *IN VITRO* GENETIC TOXICITY AND RODENT CARCINOGENICITY

E. Zanger
National Institute of Environmental Health Sciences, Research Triangle Park, NC

2. CONCORDANCE OF RESULTS BETWEEN *IN VITRO* MAMMALIAN CELL MUTAGENESIS AND CLASTOGENESIS ASSAYS

A.D. Muehlen, W.S. Casper
Genetics Research Incorporated, Mountain View, CA and National Institute of Environmental Health Sciences, Research Triangle Park, NC

3. ASSESSING A SAR BATTERY APPROACH FOR PREDICTING GENOTOXICITY

L.D. Clayton, M. Miller, B. Waka
U.S. Environmental Protection Agency and Environmental Health Research and Testing, Research Triangle Park, NC

4. THE ESTABLISHMENT OF A MICROCOMPUTER SYSTEM FOR GENETIC TOXICOLOGY DEVELOPED FROM THE "COMPUTERIZED LABORATORY NOTEBOOK" CONCEPT

G.H.S. Sgro, W.J. Stanford, S.J. Berkowitz
U.S. Environmental Protection Agency and Environmental Health Research and Testing, Research Triangle Park, NC

5. FLUORESCENCE PHOTOMICROSCOPE METHOD FOR DETECTING THE PRESENCE OF ACTIVE ENZYMES IN THE MIXED-FUNCTION OXIDATION (MFO) SYSTEM IN *S. MEX* AND OTHER PREPARATIONS

M.J. Ferguson
University of Texas Health Science Center, Dallas, TX

6. ETOPOSIDE (VP-16) AND TENIPOSIDE (VM26): NOVEL ANTICANCER DRUGS, STRONGLY MUTAGENIC IN MAMMALIAN BUT NOT PROKARYOTIC TEST SYSTEMS

R.S. Gupta, A. Branda, D.W. Bryant, R. Gupta, B. Singh, D.R. McCann
McMaster University, Hamilton, Ontario, Canada

7
AN IN VITRO AND IN VIVO EVALUATION OF THE GENOTOXIC POTENTIAL OF 2,4-PENTANEDIONE

F.J. Guzmán, R.S. Srinivas, B. Balasubramanian
Union Carbide Corporation, Export, PA

8
COMPARISON OF FICAPENTANES IN THE SALMONELLA TYPHIMURUM AND L5178Y MOUSE LYMPHOMA CELL MUTAGENESIS ASSAYS

E.S. Riccio, C.J. Rudd, K.R. Stewart, P.S. Lee, E.J. Rhee, J.H. Ebert
SRI International, Menlo Park, CA

9
THE GENOTOXIC POTENTIAL OF INOPHORONE

R.H. McKee, R.D. Phillips, E.A. Lerpine, R.S. Srinivas, A.M. Rogers-Bask, R.D. Carrea, D.I. Putman
Eaton Biomedical Sciences, Incorporated, East Millstone, NJ, Bushy Run Research Center/Midcon Institute-Union Carbide Corporation, Export, PA, and Microbiological Associates Incorporated, Bethesda, MD

10
A STUDY OF HIGH LUNG CANCER MORTALITY IN XUAN WEI COUNTY: MUTAGENICITY AND CARCINOGENICITY OF INDOOR AIR PARTICLES FROM COAL AND WOOD COMBUSTION

J.L. Mumford, C.T. Helmer, J. Seidenberg, J. Hsu, P.S. Lee, Y. Hsu, K. Naiman, X.M. Li
U.S. Environmental Protection Agency, Research Triangle Park, SRI International, Menlo Park, CA, and Institute of Environmental Health and Engineering, Beijing, China

PLANTS, FUNGI, DROSOPHILA

11
UTILITY OF ARABIDOPSIS EMBRYO ASSAY FOR TESTING COMPLEX MIXTURES

G.N. Acedo, S.S. Sandhu, D.M. DeMarini, J.L. Mumford
Environmental Health Research and Testing, and U.S. Environmental Protection Agency, Research Triangle Park, NC

12
MUTAGENICITY OF PESTICIDES IN BARLEY PROGENY TEST SYSTEM

C.B.R. Sharma, N. Panickerelvar
Bharathiar University, Coimbatore, India

13
ACTIVATION OF PROMUTAGENS BY ALGAE

M. Lippert, J.M. Guzmán, M.J. Plewa
Huron College, Holland, MI and University of Illinois, Urbana, IL

14
THE ACTIVATION OF A NITRATED PYRENE MIXTURE TO MORE POTENT MUTAGENS BY PLANT SP AND SUPEROXIDE DISMUTASE (SOD)

A.L. Lounsbury, B.S. Shann
Louisiana State University, Baton Rouge, LA

Ballroom 4, 2:30 - 4:00pm

SATURDAY POSTERS (continued)

16
CURRENT DEVELOPMENT OF A LONG TERM TEST WITH YEAST
STRAIN MPT

R. Fahlberg
Fraunhofer-Institut für Toxikologie und Aerosolforschung, Hannover, Federal
Republic of Germany

16
DNA SEQUENCE ANALYSIS OF UV-INDUCED MUTATIONS IN YEAST

B.A. Kuntz, M.R. Pierce, C.N. Groux
University of Manitoba, Winnipeg, Manitoba, Canada, York University, Toronto,
Ontario, Canada, and National Institute of Environmental Health Sciences,
Research Triangle Park, NC

17
A METHOD FOR SELECTING DOSES FOR THE DROSOPHILA SEX-LINKED
RECESSIVE LETHAL ASSAY

E.D. Thompson, B.A. Reeder
Francis and Taylor Company, Cincinnati, OH

18
MUTAGENICITY OF VOLATIVE ANESTHETIC AND NITROUS OXIDE
COMBINATIONS

J.M. Baden, Y.R. Kundumal
Stanford University School of Medicine and Veterans Administration Medical
Center, Palo Alto, CA

=====

FISH, AMPHIBIANS, BIRDS

=====

19
EVALUATION OF GENOTOXICITY USING AN ESTUARINE FISH, *FUNDULUS HETEROCLITUS*

C.B. Dabek, J.C. Means
Chesapeake Biological Laboratory, Solomons, MD

20
THE BULLFROG (*RANA CATESBEIANA*) TADPOLE: A POTENTIAL ORGAN-
ISM FOR CYTOGENETIC BIOASSAY FOR FRESHWATER POLLUTION

T.H. Auer, G.L. Cabrera, K.S. Kim
Western Illinois University, Macomb, IL

21
EFFECT OF CHROMIUM-INDUCED DNA DAMAGE ON GENE EXPRES-
SION IN THE CHICK EMBRYO *IN VIVO*

J.W. Hamilton, K.E. Witterkahn
Dartmouth College, Hanover, NH

METABOLISM

- 23
DETECTION, ISOLATION AND PARTIAL CHARACTERIZATION OF NITROARENES ADDUCTS OF DNA USING A POST-LABELLING TECHNIQUE AND A COMBINATION OF TEC AND ION PAIRING HPLC
I.B. Lambert, D.W. Bryant, L. Davison, D.R. McCalla
McMaster University, Hamilton, Ontario, Canada
- 24
BACTERIAL MUTAGENICITY AND REDUCTIVE METABOLISM OF 1, 2- AND 6-NITROBENZONITRYRENE
P.P. Fu, J.R. Thorburn-Manning, L.E. Urrah, L.S. Yoo Tange, R.H. Hark
(Intro. by W.D. Meekins)
National Center for Toxicological Research, Jefferson, AR
- 24
MICROSOMAL METABOLISM OF 1-HYDROXYMETHYLENE-2-ANTHRACENE: IDENTIFICATION, ABSOLUTE CONFIGURATION, AND MUTAGENICITY OF METABOLITES
L.S. Yoo Tange, L.E. Urrah, R.H. Hark, P.P. Fu, N.T. Wang (Intro. by D.T. Berwick)
National Center for Toxicological Research, Jefferson, AR and Hsing Kuan College, Shuang, Taiwan, Republic of China
- 25
METABOLISM OF 1- AND 2-NITROBENZONITRYRENE TO MUTAGENS IN THE CHOIGERT ASSAY
R.H. Hark, M.W. Chou, J.R. Thorburn-Manning, L.E. Urrah, P.P. Fu
National Center for Toxicological Research, Jefferson, AR
- 26
METABOLIC ACTIVATION OF α -NAPHTHOLAVONE BY THE CYTOCHROME P-450 SYSTEM PRODUCES CLASTOGENICITY
M. Andries, G.W. Lohr, J.A. Guadalupe, M. Graham, C. Thompson (Intro. by W. Scheridan)
National Institute of Environmental Health Sciences, Research Triangle Park, NC
- 27
RELATIONSHIP BETWEEN CLASTOGENICITY OF α -NAPHTHOLAVONE IN CHO CELLS AND DNA ADDUCT FORMATION
C. Thompson, M. Andries, G. Tucker (Intro. by M. Andries)
National Institute of Environmental Health Sciences, Research Triangle Park, NC
- 28
PROMUTAGEN ACTIVATION BY MAMMALIAN HEPATIC FROM METABOLICALLY ALTERED ORGANISMS
D. Heydenburg, L.S. Hark, C.C. Barney, J.M. Leath
Hope College, Holland, MI
- 29
METABOLISM OF NITROARENES IN *SALMONELLA TYPHIMURUM*: EVIDENCE FOR AN ENZYME COMPLEX WHICH BOTH REDUCES AND ACETYLATED 1,2-DINITROPYRENE
D.W. Bryant, D.R. McCalla
McMaster University, Hamilton, Ontario, Canada

Ballroom 4, 2:30 - 4:00pm

SATURDAY POSTERS (continued)

30
AN ULTRASENSITIVE ENZYME IMMUNOASSAY DETECTOR FOR HPLC
APPLICATION TO METABOLIC MONITORING

A.M. Chub, T.A. Daighinde, V.C. Ross
American University, Washington, DC

31
INCREASED RESPONSE IN PREMUTAGENS BIOACTIVATION BY RE-
PEATED ADMINISTRATIONS OF CYTOCHROME P450 AND P-450 INDUC-
ERS

M. Nicolai, F. Irelle, E. Sapigni, L. Morelli, G. Cantoni-Forti
Istituto di Farmacologia dell'Università, Bologna, Italy

32
THE ANTIMUTAGENESIS OF OXIDIZED GLUTATHIONE AGAINST AFLA-
TOXINS AND METABOLITES IN THE SALMONELLA MUTAGENICITY TEST

C.L. Rix-Kourte, D.M. Yount, R.C. Lawman
University of Missouri, Kansas City, MO

=====

MAMMALIAN CELLS IN VIVO

=====

33
DETECTION OF DIPHTERIA TOXIN AND BAZAGUANINE-RESISTANT
HAMSTER RESPIRATORY TRACT CELLS FOLLOWING IN VIVO ADMINIS-
TRATION OF MUTAGENS

D.B. Cowb, R. Jala, A.G. Bouch, J.A. Heddle
York University, Downsview, Ontario, Canada

34
MUTAGENESIS IN VIVO: PRELIMINARY EXPERIMENTS WHICH CON-
FIRM THE FEASIBILITY OF THE DETECTION OF ETHYLENTOXICUREA
(ETA) MUTAGENESIS IN MOUSE T LYMPHOCYTES

D.M. Zinnert, C.S. Aaron
The Ciba Company, Kalamazoo, MI

35
THE MOUSE IN VIVO MODEL FOR SOMATIC MUTATION AT THE HPT
LOCUS: CURRENT STUDIES

I.M. Jones, K. Barthart-Schultz, C.L. Sirost, T.L. Crippen
Lawrence Livermore National Laboratory, Livermore, CA

36
ACTIVITY OF TRITIATED THYMIDINE IN THE MOUSE BONE MARROW
MICRONUCLEUS ASSAY

F. Ratnes, J. Ashby
Polaroid Limited, Sarat, Ontario, Canada, and Imperial Chemical Industries Plc,
Alderley Park, UK

37
FACTORS AFFECTING THE TISSUE-SPECIFIC INDUCTION OF SISTER
CHROMATID EXCHANGES IN MICE

D.H. Blakey, R.D.L. Bell
Health and Welfare Canada, Ottawa, Ontario, Canada

Ballroom 4, 1:30 - 4:00pm

SATURDAY POSTERS (continued)

- 38
THE INDUCTION OF SCE IN THE BONE MARROW OF B6C3F₁ MICE FOLLOWING SINGLE OR REPEATED INHALATION OF BENZENE
A.L. Broday, P.J. Schourie, R.E. Henderson
Lowrance Inhalation Toxicology Research Institute, Albuquerque, NM
- 39
COMPARISON OF *IN VIVO* CYTOGENETIC MEASUREMENTS OF CHROMOSOMAL REPLICATIONS IN MOUSE BONE MARROW AND SPERMATOGONIAL CELLS
M.H. Dango, H.P. Rappaport, J.W. Allen, J.C. Hester
Florida Institute of Technology, Melbourne, FL and U.S. Environmental Protection Agency, Research Triangle Park, NC
- 40
PREDICTION OF ENVIRONMENTAL STOMACH CARCINOGENS AND PROMOTERS BY *IN VIVO* SHORT-TERM ASSAY
C. Furukawa, T. Matsushima
University of Tokyo, Tokyo, Japan
- 41
APPLICATION OF THE PERIPHERAL BLOOD ERYTHROCYTE MICRONUCLEUS ASSAY TO DETECTION OF CHROMOSOMAL DAMAGE FROM REPEATED EXPOSURES TO GENOTOXINS
C.M. Webb, P.K. Hsieh, J.T. MacGregor
U.S. Department of Agriculture, ARS, Beltsville, CA
- 42
DEVELOPMENT OF A SUBCUTANEOUS PERIPHERAL BLOOD MICRONUCLEUS ASSAY IN MALE AND FEMALE ICR MICE
H.D. Leshowitz, J.L. Itoh
Hathaway Laboratories America, Incorporated, Kenilworth, MD
- 43
GENOTOXIC INTERACTIONS OF HEAVY METALS IN HEPATOCYTES
M. Markey, D. Jurek, F. Denton
Universite du Quebec a Montreal, Montreal, Quebec, Canada
- 44
GENOTOXIC EFFECTS IN RAT AFTER *IN VIVO* TREATMENT WITH A BENZIDINE DERIVED AZO DYE
B.K.M. Sells
Stockholm University, Stockholm, Sweden
- 45
URINE MUTAGENICITY IN RATS AS AN *IN VIVO* INDEX OF GENOTOXIC EXPOSURE
C.A. Rapp, D.A. Lee, C.K. Lee, D.J. Doolittle
R.J. Reynolds Tobacco Company, Winston-Salem, NC

Ballroom 4, 2:30 - 4:00pm

SATURDAY POSTERS (continued)

MAMMALIAN GERM CELLS

46
 CYCLOPHOSPHAMIDE-INDUCED DAMAGE TO SYNAPTONEMAL COM-
 PLEXES AND METAPHASE CHROMOSOMES IN MOUSE MEIOTIC CELLS
 L.C. Backer, J.B. Gibbon, M.J. Mason, J.W. Allen
 U.S. Environmental Protection Agency, Research Triangle Park and Duke University, Durham, NC

47
 UTILIZATION OF SEMINIFEROUS TUBULE SEGMENTS TO STUDY UN-
 SCHEDULED DNA SYNTHESIS (UDS) IN MALE RATS EXPOSED TO
 METHYL METHANESULFONATE (MMS)
 K.S. Bentley, P.K. Working (Introd. by D. Simpson)
 Chemical Industry Institute of Technology, Research Triangle Park, NC

48
 DIFFERENTIAL SENSITIVITY OF PREOVULATORY MOUSE OOCYTES TO
 COLCHICINE INDUCED ANEUPLOIDY
 J.B. Muller, Z.P. Yuan
 Louisiana State University Medical Center, Shreveport, LA

49
 EFFECTS OF ACRYLAMIDE AND ACRYLONITRILE ON UNSCHEDULED
 DNA SYNTHESIS (UDS) IN RAT SPERMATOCYTES
 M.E. Hurt, K.S. Bentley, P.K. Working
 Chemical Industry Institute of Technology, Research Triangle Park, NC

50
 DOMINANT LETHAL ASSAY OF ACRYLONITRILE AND ACRYLAMIDE IN
 THE MALE RAT
 P.K. Working, K.S. Bentley, M.E. Hurt, K.L. Mohr
 Chemical Industry Institute of Technology, Research Triangle Park, NC

51
 IN VITRO DOMINANT LETHAL ASSESSMENT OF BUTYL METHANESUL-
 FONATE (BMS) INDUCED OOCYTE DAMAGE IN THE MOUSE
 K.S. Bentley, P.K. Working (Introd. by T. Craft)
 Chemical Industry Institute of Technology, Research Triangle Park, NC

52
 ASSESSMENT OF FETAL DEATH RATE AMONG IN UTERO PROGENY OF
 B6C3F1 AND C57BL/6J AFTER SUBCUTANEOUS INJECTIONS OF MALES
 WITH BUTYL BENZYL PHTHALATE (BBP)
 J.B. Gibbon, C.M. Tard, B. Buchanan
 National Institute of Environmental Health Sciences, Research Triangle Park,
 N.C. and Florida State University, Tallahassee, FL, Consumer Products Safety
 Commission, Washington, DC

06 NOV 90

SATURDAY, 4:00 pm - 6:00 pm

SYMPOSIUM

SHORT-TERM TESTS AND THE RODENT BIOASSAY
A CRITICAL EVALUATION

Ballroom 5

David J. Brusick, Presiding

Sponsor: SRI International

One of the more controversial aspects of genetic toxicology testing is the mechanistic and correlative associations between short-term test results and in vivo responses. This Symposium will address both associations as they exist for heritable genetic damage and cancer in rodent bioassays. The former will consist of brief prepared presentations describing the information as it exists followed by a scientific forum among panelists familiar with the complexities of this issue. The objective is to provide both a perspective on the development of the data as well as a direction for future efforts in reconciling apparent inconsistencies.

4:00 PERFORMANCE OF SHORT-TERM TESTS - MUTAGENESIS

Barry Margolin
National Institute of Environmental Health Sciences

4:25 PERFORMANCE OF SHORT-TERM TESTS - CARCINOGENESIS

Joseph Haseman
National Institute of Environmental Health Sciences

4:45 PERFORMANCE OF THE RODENT BIOASSAYS - CARCINOGENESIS

Stephen Newton
U.S. Environmental Protection Agency

5:05 PERFORMANCE OF THE RODENT BIOASSAYS - MUTAGENESIS

Michael Shelby
National Institute of Environmental Health Sciences

5:25 PANEL DISCUSSION

John Ashby
Imperial Chemical Industries, U.K.

Ian Morris
Ciba-Geigy, Inc.

Donald Clive
Burdock Wellcome Co.

Vern R. Ray
Pfizer, Inc.

Maryn Legator
University of Texas, Galveston

Herbert Rosenkrantz
Case Western Reserve University

Mortimer Mendelsohn
Lawrence Livermore National Laboratory

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08 100 90 48

Black, W.B. 15, 20, 49, 51
Blacker, W.T. 10
Blavin, R.D. 45
Bodell, W.J. 18
Bolly, J. 34
Borucki, C.J. 21, 31, 32
Bouch, A.O. 65
Bouker, R. 47
Boyer, R.O. 19
Bradley, W.B.C. 34
Bradley, W.C. 44
Brady, A.L. 34
Brady, W.L. 30
Brennan, B. 17
Brennan, J. 32
Bruck, K. 15, 27, 31, 47
Bruckman, H.S. 20, 22
Bruder, C. 27
Brugha, A. 41
Bruckman, K.W. 44
Bruck, A.L. 30, 68
Bruckman, K.A. 12, 30
Brown, B.J. 10
Brown, J.E. 13
Brown, W.R. 45
Brown, F.W. 25
Brown, D. 64
Brown, O.T. 32
Brown, J.W. 61, 64, 66
Bryce, J.D. 30
Bryant, Wanda, K. 68
Bryce, C. 45
Bryce, P.A. 14
Bryant, A. 23
Bryant, B. 14
Bryant, D.B. 32
Bryant, S.B. 30
Byrne, P. 14

Cabana, O.C. 67, 69
Cabana, O. 25
Cabana, J.D. 40
Cambler, E. 23
Cambler, J. 15
Cambler, P.O. 65
Cambler, J. 17

Cayana, A.V. 17, 12, 17, 65, 44
Cayana, W.A. 34
Cayana, J.R. 40
Cayana, J.H. 47
Cayana, D.A. 24, 30
Cayana, W. 15, 20, 27, 27, 25, 31, 31
Cayana, P. 20
Cayana, T.A. 45
Cayana, P.C. 25
Cayana, R. 21, 29
Cayana, J. 30
Cayana, M.A. 23
Cayana, J. 31
Cayana, T. 30
Cayana, A.M. 65
Cayana, A.T. 31, 35
Cayana, D.J. 34, 44
Cayana, M.W. 64
Cayana, M.L. 17
Cayana, V. 30
Cayana, J.D. 12, 31, 31, 32, 40, 60
Cayana, D. 27, 27, 27, 41, 60
Cayana, T. 45
Cayana, C.C. 60
Cayana, S.P. 25
Cayana, G.A. 33
Cayana, D. 40
Cayana, S. Navy, C. 22, 34, 34
Cayana, J.R. 45
Cayana, M. 30
Cayana, T.H. 22, 65
Cayana, C. 20
Cayana, T.L. 65
Cayana, S.M. 32, 45
Cayana, L. 23
Cayana, S.D. 61

Dei, T.A. 34
Dei, C.B. 43
Dei, B.H. 40
Dei, D.D. 27
Dei, C. 64
Dei, J. 65
Dei, S.A. 45
Dei, D. 45, 24
Dei, J. 30

06 NOV 90 18

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**CONTINUATION
ON MICROFICHE:**

F 0079

2501644883

Deahl, J.T. 49
 Deatch, K.J. 15
 Deitch, R.A. 30, 30
 DeMunn, D.M. 21, 27, 31, 31, 62

Denizau, F. 66
 Dimnik, I.S. 36
 Dobson, R.I. 51
 Doerr, C.I. 23, 47
 Donnelly, R.C. 30
 Dooley, J.E. 28
 Doohill, D.J. 30, 66
 Douglas, G.R. 15
 Doung, H. 89
 Downe, R.H. 46
 Drobelsky, E.A. 60
 DuFrais, R.J. 16
 Dunbar, V.G. 22
 Dunkel, V.C. 23

Eagan, P. 17
 Edwards, L. 51
 Ehling, U. 39
 Ekenstam, A. 50
 Ekepur, W.K. 45
 Elmore, W. 29
 Enneker, P.K. 43, 56
 Epler, J.L. 34
 Ercan, G.L. 49, 48
 Erwin, L.N. 17, 56
 Evans, H.H. 25
 Eyrsson, R.B. 15, 17, 17, 17, 68

Faling, R. 13, 63
 Falicki, A. 22
 Farrelly, J.G. 45
 Feltman, S. 14, 25, 29, 33, 33
 Ferguson, M.F. 61
 Fischer, J.R. 68
 Fickel, C. 21, 29
 Fijack, A. 49
 Fitchard, B. 35
 Fowler, R.C. 16
 Fox, D.P. 32
 Fox, M. 32
 Francis, A.A. 44, 44
 Friedman, P. 38

Frome, J.I. 28
 Fry, R.J.M. 49
 Fu, P.P. 46, 64, 64
 Fultz, L. 31
 Furukata, C. 66
 Fuscoe, J.C. 14

Galloway, S.M. 48
 Gargallo, S.D. 53
 Garcia, S. 46
 Garret, R.C. 16
 Garsow, M. 47
 Gately, V.E. 28
 Gaudert, M.P. 16
 Geard, G.R. 21
 Genet, E.E. 31
 Gentile, U.J. 57
 Gellule, J.M. 57, 57, 62, 64
 Georgescu, M. 21
 Gibson, J.B. 67
 Gignu, P.E. 16
 Gilmour, V.S. 53
 Giroud, S.N. 63
 Gluckman, B.W. 14, 50, 50
 Godes, E.C. 26, 26
 Gold, A. 31
 Goldberg, M.T. 35, 33
 Goldman, J. 15
 Goldring, J.M. 51
 Goldstein, J. 35
 Goldstein, J.A. 64
 Goldworthy, E.L. 35
 Gomez, M. 30
 Gomez, M. 34
 Gopier, C.H. 49, 49, 49, 68
 Gonsky, M.E. 28
 Gonzalez, D. 49
 Gordon, A.J.E. 14
 Gordon, J.A. 45
 Gordon, J.A. 17
 Goss, S. 30
 Graham, M. 64
 Grady, D. 53
 Green, N.B. 53
 Greene, C.J. 15
 Gregorick, A.J. 30

Grangewick, C.R. 44
 Gupta, R. 61
 Gupta, R.S. 61
 Gyllenplan, J.B. 16
 Gurman, R. 1, 32
 Guzzie, P.J. 33, 62

Halpern, E.C. 48, 48
 Halpern, M. 30
 Hamilton, J.W. 63
 Hammond, K. 35
 Hammond, S.K. 35
 Hanawalt, P. 18

Hannan, M.A. 46
 Harbach, P.R. 43, 44
 Harbitt, J.W. 28
 Harrison, R.D. 29
 Harkins, M. 28
 Haroun, I. 56
 Harper, D.J. 33, 47
 Harris, M.M. 57

Hart, J. 11
 Hartman, P.E. 14
 Haseman, J. 49
 Haseman, S.H. 29
 Hatch, F.E. 29
 Hawthorn, G.M. 32
 Hawthorn, S. 47

Hay, C. 27
 Hayashi, H. 35
 Hayashi, T. 35
 Healy, S.K. 14, 33
 Healy, J.A. 68
 Healy, R.H. 12, 46, 64, 64

Heimer, C. 62
 Henderson, R.F. 66
 Hendra, P.R. 66
 Herbig, U.G. 56
 Heron, E. 55

Herrnstein, C. 15
 Hesch, L.S. 64
 Hestberg, T.W. 31
 Heydenburg, D. 64
 Hiett, R. 15
 Highsmith, R. 93
 Hill, W.E. 45

Hix, C.E. 34
 Hix, D.L. 56
 Hoffmann, G.R. 45
 Holbrook, C.J. 48
 Holden, H. 19
 Hollander, D.A. 29

Honora, G. 48, 48
 Hook, G.J. 14, 49
 Hooper, K. 15
 Hosenberry, G. 26
 Host, V.S. 31, 31, 62
 Howard, P.C. 25

Hoyer, J. 27, 27, 66
 Hukla, P. 65
 Huse, A.W. 52, 52
 Hutch, D.P. 45
 Hughes, F.J. 35, 46
 Humphrey, P.R. 54

Hunter, T.C. 52, 68
 Hunt, M.E. 67, 67
 Huxford, J.D. 31
 Huxton, J.P. 21, 31
 Hynes, R. 56
 Hyslop, T.R. 46

Ishida, R. 17
 Ivett, J.L. 66
 Jacobson, K.M. D. 40
 Jain, K. 65
 Jager, P.A. 34
 Jahnke, P.V. 53

Jensen, R.H. 17, 17, 34
 Jewett, V. 54
 Johnson, T.W. 31
 Johnson, G.V. 56
 Jones, F. 28
 Jones, I.M. 65

Jordan, D. 66
 Kadlubart, F.F. 46
 Kadu, N.Y. 35, 45
 Kalinowski, D. 57
 Kalman, R.M. 21
 Kasi, F. 57
 Kassi, H. 35

Kaswee, K., 22
 Katz, M., 20
 Kaufman, P.R., 44
 Keller, E., 30
 Kelley, K.T., 32
 Kennedy, J.C., 15
 Key, E.D., 12, 10
 Kim, K.S., 63
 Kimball, E.S., 87
 Kimball, P.A., 32
 King, P., 21
 Kirk, A.M., 31
 Kirkland, D.J., 15
 Kirk Young, C.E., 65
 Kishin, R.M., 56
 Kleinfelt, A., 51
 Kline, U., 20
 Kligerman, A.E., 48, 48
 Knize, M.S., 29, 33, 33
 Knoll, W.R., 51
 Knowles, S., 53
 Kozak, R.M., 21
 Koch, W.H., 53
 Koshka, J.S., 49
 Koshka, J., 45
 Koshka, A., 47
 Koshka, J.P., 24
 Koshka, R., 27, 27
 Koshka, M., 55
 Koshka, U., 40, 20
 Koshka, M., 41
 Koshka, Y.R., 63
 Koshka, B.A., 63
 Koshka, C.D., 47
 Koshka, J.C., 51
 Koshka, H., 57
 Koshka, A., 30
 Koshka, J.C., 29
 Koshka, J.B., 64
 Koshka, J.R., 21, 31
 Koshka, M.L., 23
 Koshka, R., 13
 Koshka, R., 28, 33
 Koshka, R.G., 17, 34
 Koshka, R.C., 65
 Larimer, F.L., 57
 Lavappa, K.S., 53
 Lawler, J.F., 47
 Lawler, J., 30
 Lawler, H.D., 46
 Lee, G.K., 30, 30, 30
 Lee, D.A., 30, 46
 Lee, P., 24
 Lee, P.S., 62, 62
 Lee, M.S., 22, 22, 33, 47, 48, 51, 56
 Lee, 68, 68
 Leeman, S.A., 62
 Leu, R., 32
 Lewis, J., 21, 21, 30, 35, 68
 Lewis, J.P., 31
 Lewis, M., 62, 68
 Lewis, M., 74
 Lewis, J.L., 45, 52
 Lewis, M., 39
 Lewis, S.L., 48
 Lippert, M., 40
 Liu, J.H., 32, 52
 Liu, J.H., 32
 Liu, J.H., 30, 35
 Liu, P.H.M., 58
 Liu, S.A., 45
 Liu, A.L., 62
 Liu, F., 28
 Liu, J., 35
 Liu, K.S., 58
 Liu, J., 30
 Liu, K.H., 48
 Liu, K.H., 50
 Lowery, M.C., 31
 Lowery, J.W., 64, 64
 Lowery, M.H., 66
 Lowery, C.A., 47, 47, 48
 Lowery, A., 13
 Ma, T.H., 57, 57, 63
 Macgregor, J.T., 15, 46
 Mahan, M.L., 47
 Mahan, M.L., 36, 44
 Mahan, J.M., 32
 Mahan, C.R., 28, 30, 30
 Mahan, C., 32

MacLaren, R.A., 48
 Macphie, D.G., 16
 Malick, V.M., 17, 50
 Mallick, J.B., 67
 Marjha, J.B., 37
 Margison, G.P., 32
 Margolin, H., 60
 Marion, M., 66
 Marsden, P.J., 20
 Marsh, K.S., 52
 Matheson, D.W., 27
 Matsumoto, T., 64
 Matthews, R.J., 26, 28, 29, 30
 Maule, T.F., 15, 46
 Mayo, F., 41
 Mayur, M., 50
 Mayock, J., 40
 McHec, K., 22
 McCalla, D.R., 61, 64, 66
 McCann, M.A., 16
 McCowan, R.J., 17, 30
 McCut, J.C., 14
 McCurdy, N.M., 35
 McGeed, G., 27
 McGinnis, M.J., 34
 McGregor, D., 26, 51
 McKee, R.H., 33, 62
 McKenna, W.H., 28
 Medina, J.A., 50
 Medina, R.J., 44
 McGee, K., 25, 29
 Mezey, J.R., 49, 51
 Mezey, M.J., 11, 50
 Mezey, J., 25
 Medeiros, M., 69
 Mendelsohn, M.L., 31
 Meising, K., 34
 Meising, S., 17
 Menden, W.R., 14, 15
 Meredith, M.V., 29
 Miller, I.R., 57
 Miller, M., 61
 Miller, G., 29
 Minkler, J.L., 25, 44
 Minsala, J.L., 31
 Mizayana, E., 29

Mitchell, A.D., 28, 61
 Mitsu, T., 31
 Miyazawa, T., 35
 Mohr, C.D., 41
 Mohr, K.L., 67, 67
 Mulvihill, E., 31
 Morone, J., 69
 Monteb, L.G., 35, 46
 Morley, R., 34, 49, 68
 Morse, M.M., 15, 27, 27, 31, 47
 Morris, Kanner, P., 53
 Mortland, J.M., 21
 Mori, T., 25
 Morris, M.J., 56
 Moroney, R.L., 29
 Murricey, R.L., 43
 Murrell, K., 52
 Murre, M.J., 67
 Murre, M.L., 13
 Murre, T.D., 45
 Murre, K., 55
 Murrell, J.J., 59
 Murrell, J.L., 23, 35, 62, 68
 Murrell, V.J., 35
 Murrell, L., 65
 Murphy, D.D., 29
 Murrell, J.O.M., 28
 Murrell, A., 31
 Murrell, G.H., 35
 Murrell, T.F., 46
 Murre, B., 29
 Nagata, M., 33
 Nagata, Y., 56
 Nagata, R.S., 30
 Nagata, R.W., 26, 26, 26, 30, 44
 Nagata, K., 26, 60
 Nagata, S.A., 15
 Nait, J., 20, 20, 50
 Nait, J., 69
 Nelson, R., 28
 Nelson, S., 62, 69
 Nestmann, F.R., 15, 57
 Neuhäuser, Klaus, A., 11
 Newman, D., 48
 Ni, Y.C., 46

Nichlas, J.A., 52, 64
 Nilan, R.A., 51
 Nishimura, S., 35
 Nohla, M.A., 56
 Nordstrom, F., 30
 Norimura, T., 17
 Norpoth, K., 33

O'Donnell, M.W., 53
 Ohara, Y., 35
 Okazaki, R.T., 44, 45
 Oldham, J.W., 48
 Olsson, F.B., 12
 Olivieri, G., 14
 Olsen, H.E., 45
 Oliveira, R., 32
 O'Neill, J.P., 15, 52, 68
 Ong, T., 20, 20, 46, 50, 52
 Onigbinde, T.A., 45
 Ormiston, B.G., 47
 Orr, J., 64
 Osahiro, Y., 24
 Ostrowsky, Wegman, P., 34, 49, 68
 Owens, W.M., 51

Pagan, D.A., 46, 50, 52
 Palowick, N., 31
 Pancherbo, G.C., 43
 Panicker, N., 62
 Pansell, K., 46
 Paoletti, M., 65
 Paquette, D.F., 47, 48
 Pardo, K., 15, 28
 Parker, A.R., 57
 Paros, X., 52
 Parley, T., 31
 Paterson, M.C., 29
 Paterson, S.R., 21
 Payne, W.L., 45
 Peabody, R.A., 50
 Penman, B., 28
 Pereira, P.P., 68
 Perini, C., 55
 Peters, B.J., 15
 Peters, J.H., 62
 Phillips, R.D., 63

Pierce, M.R., 63
 Pinkel, D., 36
 Piper, C.B., 26, 47, 47
 Placarte, A., 49
 Plawa, M.J., 56, 57, 57, 57, 62
 Polier, M.C., 68
 Polinsky, T., 26
 Poorman, P.A., 27
 Popp, J.A., 35
 Pomeroy, G.H., 53
 Potter, A.A., 57
 Pouch, I.R., 14
 Poulton, R.P., 48
 Preston, R.J., 12, 14, 26, 49, 49, 54
 Przygoda, R.T., 31
 Purin, S.F., 43
 Putman, D.L., 62

Rahn, C.A., 66
 Raj, A.S., 21
 Ramani, V.M.S., 22, 33, 48
 Randall, V.G., 52
 Randerath, E., 68
 Randerath, K., 68
 Rao, T.K., 12, 53
 Rapin, F., 65
 Rauchfuss, H.F., 66
 Raulin, H., F.J., 25
 Ray, V., 69
 Reardon, J.T., 53
 Rees, F., 52
 Reed, E., 68
 Reed, F.A., 40
 Reddy, B.A., 63
 Regan, J.D., 34, 34, 44
 Reidy, J.A., 32, 32
 Reiss, E.J., 62
 Reiss, M.A., 49
 Reynolds, R.J., 34, 48
 Rich, C., 26
 Rich, E.S., 62
 Richardson, K.K., 32, 45
 Rinkus, S.J., 33
 Rishbeth, K., 22, 51
 Roberts, M.R., 48
 Robertson, J.C., 68

Robison, E.H., 44
 Robt, D.O., 29
 Rogers, O.O., 15
 Rogers, S.J., 46
 Rogers-Bark, A.M., 62
 Roden, J., 50
 Rodde, R.C., 51
 Roedelmeier, H.S., 19, 41, 56, 60
 Roem, V.C., 65
 Roenema, T.O., 25
 Ruby, L.M., 25
 Rudel, C.J., 15, 24, 62, 63
 Rude, N.L., 56
 Ruff, J., 30
 Ruch, M., 49
 Russell, J.H., 50
 Russell, L.B., 13
 Russell, W.L., 51
 Sabowin, P.J., 64
 Sackey, E.P., 25, 44
 Sackhez, J.H., 31
 Sackin, S.S., 22, 31, 56, 62
 Sengstad, R., 51
 SenSchleusen, J.R., 36
 Sengph, E., 65
 See, E.J., 50
 Seel, S., 35
 Seem, V.L., 22, 22
 Seeyet, J., 27
 Seelish, M., 53
 Seeger, J.B., 32
 Seiderer, M.B., 35
 Seid, D., 16
 Seigler, V., 53
 Seid, H.M., 26
 Seigener, C.A., 24, 30, 39
 Seiderer, C.H., 52
 Seiwitz, J.I., 16
 Selby, W.E., 57
 Seider, D.D., 48
 Seiga, G.A., 51
 Seidenberg, J., 62
 Seifert, A.M., 34
 Seife, B., 63
 Seliger, H.H., 55
 Shaddock, J.G., 26, 29
 Shadley, J.D., 14
 Shady, D.A., 22
 Shalk, H.M., 56
 Sha, B., 12
 Shalld, S.I., 46
 Shae, J.B., 37, 61
 Sharpe, Y., 53
 Shatly, I., 17
 Shetina, C.B.S.R., 62
 Sheddell, A.H., 43
 Sheldy, M., 19, 69
 Shet, N.H., 14, 29, 33
 Shet, C.W., 23, 51
 Shiget, L.R., 52
 Shiber, K.A., 16
 Shierman, D.M., 95
 Shierman, D.S., 46
 Shigh, B., 61
 Shigh, N., 36
 Shipek, T.R., 32, 45
 Shikowitz, R.S., 62, 62
 Shink, A.I., 44
 Shink, C., 47
 Shink, C., 35
 Shink, D., 15
 Shink, K.R., 21
 Shink, P.A., 15
 Shink, P.M., 22
 Shink Oliver, T., 35
 Shink, I.M., 20
 Shink, M., 20
 Shink, J.K., 31
 Shinkling, J.W., 23
 Shink, K.M., 45
 Shink, J.F., 56
 Shink, W.L., 20, 61
 Shink, J., E.P., 12, 25, 26, 26, 26, 43
 Shink, A.A., 52
 Shink, S., 23
 Shink, E.E., 26
 Shink, V.E., 29
 Shink, K.L., 31
 Shink, B., 23
 Shink, B.E., 49

Stewart, D.L., 45, 50
 Stewart, J., 46, 52
 Stewart, K.R., 62
 Stewart, M.L., 45
 Stewart, S.A., 25, 44, 44
 Stoner, G.D., 43
 Stropfer, M., 68
 Strauss, T., 51
 Strauss, G.H.S., 20, 61
 Strain, G.P., 34, 44, 45
 Strout, C.L., 63
 Stuart, E.W., 23
 Suggs, D., 25
 Sugimura, T., 33, 39
 Suk, W.A., 23
 Sullivan, L.M., 15, 52
 Sultis, J., 34
 Swenson, D., 43
 Swierenga, S.H.H., 29
 Szeklik Salas, J., 25

 Tachibana, A., 17
 Talper, R.A., 49
 Takebe, H., 17
 Tan, H., 29
 Taniuchi, K., 17
 Teyke, J., 53
 Taylor, K.I., 35
 Taylor, R.T., 33, 33
 Teal, C.M., 67
 Tennant, B.W., 23
 Teshuk, S.J., 35
 Terzner, J., 34, 44
 Therio, J.C., 43
 Thielmann, H.W., 52
 Thomas, H.P., 47
 Thomas, S.M., 16
 Thompson, C., 64, 64
 Thompson, E.D., 63
 Thompson, T.H., 18, 25, 34, 44, 44
 Thornton Manning, J., 64, 64
 Tibb, R.R., 47, 47, 48, 68
 Tindall, K.B., 25, 26
 Tobias, C.A., 17
 Toyoda, M., 17
 Travieso, M., 21

Trosh, J.B., 25
 Tronclair, A.M., 53
 Truckee, M.W., 45
 Truss, R., 43
 Tucker, J.D., 17, 17, 23
 Tuma, W.G., 26, 26, 26, 26
 Turner, J.H., 33
 Turner, N.T., 27
 Turcat, L.J., 45
 Tyler, S.J., 33

Uhrak, L.E., 64, 64, 64

Valio, H., 56
 Valencia, R., 43
 Vallentyne, R.M.E., 57
 Van Arnold, J.D., 23
 Van der Sluis, D., 43
 Van Hagen, C.C., 43
 Vadelago, A.M., 33
 Van Borsel, R.C., 57
 Von Tungeln, L.S., 64, 64

Wadhvani, A., 27
 Wagner, E.D., 52
 Wakabayashi, K., 33
 Walker, O., 18
 Walsh, D., 61
 Wang, N.P., 64
 Wang, Y.Y., 23, 29
 Ward Jr., J.B., 15, 33, 68
 Wargovich, M.J., 35
 Warren, S., 23, 31
 Waters, M.D., 56
 Weber, C.A., 44
 Wehr, C.M., 15, 64
 Wei, C.I., 29
 Welby, T., 32, 32
 Westbrook Collins, B., 48
 Wetterhahn, K.E., 43
 Whaley, T.W., 45
 Wheeler, W.B., 29
 Whong, W.Z., 46, 52
 Whorrie Jr., E.B., 15, 22
 Winick, J.K., 14, 14, 14
 Wilkinson, E.P., 29

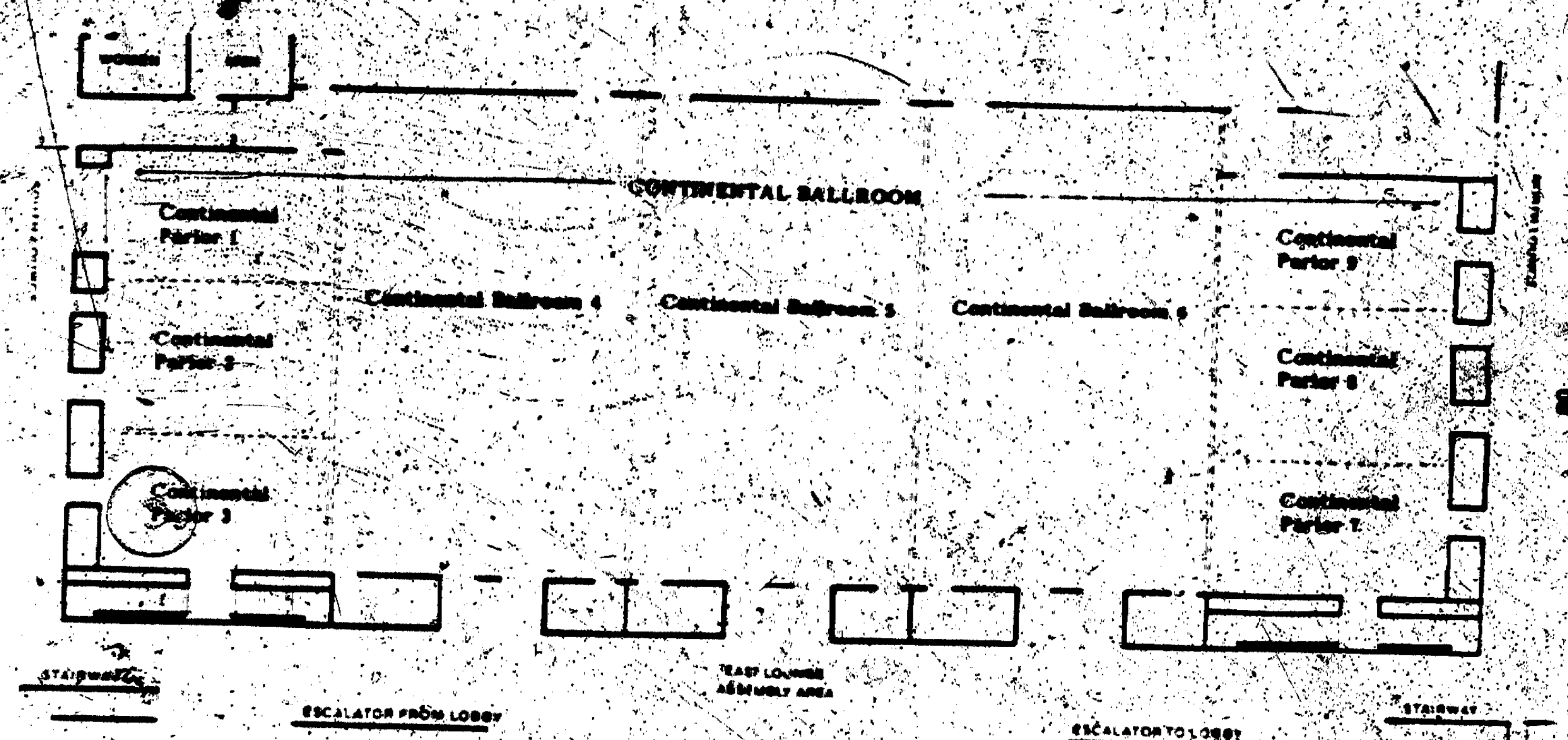
Williams, J.R., 49
Williams, K., 21, 30
Williams, L.R., 29
Williams, R., 31
Wilson, N., 30
Wingard, R.A., 49, 54
Winkler, B., 57
Winston, G.W., 53
Wiser, S.K., 43, 44
Wischer, L.W., 28
Wolff, G.L., 43
Wolff, S., 14, 14
Working, P.K., 67, 67, 67
Woskie, S., 35
Wright, D., 32
Wrobel, J.A., 45
Wróblewski, D.H., 45
Wu, R., 14
Wyrobek, A.J., 17, 17, 17

Xu, Z., 57

Yager, J.W., 20
Yamaguchi, Z., 35
Yan, Z.A., 49
Yandell, D.W., 52
Yang, J.L., 50
Yang, T.C., 17
Yano, M., 33
Yokoyama, S., 35
Yorice, D.M., 65
Yuan, Z.P., 67
Yuan, J., 38

Zeiger, E., 46, 49, 50, 52, 54, 61
Zhou, X.T., 49
Zielinski, M., 16
Zimmer, D.M., 43, 65
Zweidinger, R., 33

06 NOV 90 12



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